

Application No.: 10/699,164
Docket No.: HT3945USNA

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Amendments to Claims

1. (Currently amended) In a process for wet spinning a meta aramid polymer from a solvent spinning solution containing concentrations of polymer, solvent, water and at least 3 percent by weight salt comprising the steps of:

(a) coagulating the polymer into a fiber in an aqueous coagulation solution containing a mixture of salt and solvent such that the concentration of the solvent is from about 15 to 25 weight percent of the coagulation solution and the concentration of the salt is from about 30 to 45 weight percent of the coagulation solution and wherein the coagulation solution is maintained at a temperature from about 90 to 125 degrees Celsius;

(b) removing the fiber from the coagulation solution and contacting it with an aqueous conditioning solution containing a mixture of solvent and salt such that the concentrations of solvent, salt and water are defined by the area shown in Figure 1 as bounded by coordinates W, X, Y and Z and wherein the conditioning solution is maintained at a temperature of from about 20° to 60°C;

(c) drawing the fiber in an aqueous drawing solution having a concentration of solvent of from 10 to 50 percent by weight of the drawing solution and a concentration of salt of from 1 to 15 percent by weight of the drawing solution;

(d) washing the fiber with water; and

(e) drying the fiber;

wherein the improvement comprises drawing the fiber while in contact with the conditioning solution of step (b) by applying a draw ratio of greater than 1:1 and the aqueous conditioning solution of step (b) and the aqueous drawing solution of step (c) represent separate solutions with the solvent concentration of the drawing solution less than the conditioning solution.

2. (Original) The process of claim 1 wherein the draw ratio through the conditioning solution is in a range from 3:1 to 6:1.

3. (Original) The process of claim 2 wherein the draw ratio through the conditioning solution is in a range from 4:1 to 5.5:1.